Management & Delivery of Digital Print via the Web: A Case Study of Gaia Fulfilment

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EXECUTIVE SUMMARY

In this article, we use the experience of Gaia Fulfilment to demonstrate the challenges of developing and deploying collateral fulfillment, i.e., short-run print on demand via the Web. By discussing the technological innovations that Gaia achieved we will outline their product development steps and the solutions the technology enabled. We also show the benefits of collateral fulfillment by presenting two examples of customers that use Gaia’s technology. The paper concludes with the challenges that Gaia faced and ways they attempted to resolve them.

Keywords: business process reengineering; business-to-business B2B; marketing; digital print; eBusiness; on-demand delivery service; SMEs; virtual web organization; web technologies; web-based applications; web-based supply chain management

ORGANIZATIONAL BACKGROUND

The Internet has revolutionized the way SMEs and SoHo (Small Office Home Office) companies do business. A small organization can have the same ‘footprint’ on the Web as a much larger one. Indeed, some forward thinking organizations are virtual companies, with a huge online presence. However, an area where large enterprises still reign supreme is that of printed material.

There is a long established relationship between volume and price in printing; so the more copies required the greater the quality per unit cost spent. SMEs often present their products well on the Web, but cannot justify expensive traditional printing for short runs. Inevitably, products that have taken years of work are ultimately presented on print from inexpensive desktop printers. Even larger organizations face major challenges when it comes to short print runs.

In 2001 Gaia Fulfilment (http://www.gaia-fulfilment.com), with support from Xerox, started developing a print-on-demand solution. Not unlike Gutenberg, who took existing technologies like ink, paper, a wine press, metal letters and created a new tech-
technology, Gaia took the internet, Lotus Domino (or simply Domino) and the Docucolor 2060 and invented a new technology — collateral fulfillment — true full color short run digital print over the Web. 

Offering collateral fulfillment over the Web was the key to the success of the technology as the Internet can facilitate the effective ordering and monitoring process, which is extremely important especially when it comes to a large number of transactions, e.g., in B2B. Although printing over the Web rarely features at the top of the Internet based ‘killer applications’, such as video-on-demand (Ayres & Williams, 2004), it is hard to see how this technology would have been viable without the Internet. As “the use of the Internet will lead to a generation of a wider range of new product ideas” (Ozer, 2003) more technologies like digital printing will find their way to market.

“Given its speed, convenience, interactivity the Internet can help firms collect, categorize and use information needed for product development, enable them to understand their market better and, hence, help them reduce the fuzziness in the new product development process. In addition, the Internet can facilitate the collaboration of different people who are involved in product development, increase the speed and the quality of new product testing and validation and improve the effectiveness and the efficiency of manufacturing development and new product launch. Thus, there seems to be a match between the offerings of the Internet and the different requirements of the new product development process” (Ozer, 2003), which can result to the minimization of risks, especially when developing new technologies.

Gaia was established as a Private Limited company for the sole purpose of delivering print-on-demand over the Web. Its founders were Andy Bex (technical director) and Ian Scanlan (sales director). Both of them still (2004) lead the company. Andy Bex has been the managing director of two other IT companies: an IBM partner software development house and an IT-training agency. He is a principal certified Lotus professional and a member of the Association of Project Managers. Ian Scanlan worked for 15 years with Xerox, in sales, before starting Gaia. Their combined skill set and experience naturally lead to a printing solution over the Web. These skills are of key significance as lack of managerial, technical and marketing skills are a common component of underperformance in start-up companies (Kakati, 2003). Added to their skills was the entrepreneurial attitude of the two directors which led them to attempt to exploit a market opportunity. In a Schumpeterian view they carried out a technological innovation through a new combination of tools: by introducing a new method of production, Gaia contributed in the establishment and expansion of a new market (Schumpeter, 1934).

Gaia chose a flat management structure, with nearly its entire business process being outsourced, apart from the Domino-related development, marketing and support. All administration and facilities are bought in from a print partner. Development and infrastructure is managed by Andy Bex with all development being outsourced to two companies. Sales and marketing activities, managed by Ian Scanlan, are through a two-tiered reseller channel with the first tier being the print partners who have licensed Gaia’s technology and the second tier being independent resellers interacting via a dedicated Web technology. This effectively reduced to a minimum standing overhead and allows the company to be managed with by a handful of staff.
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